5: Nicolaisen E-4, 5 (1951-1955) 1959
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to indicate that the two latter types of marriage are more common than are marriages with cross-cousins:– 582

Mother's brother's daughter	3
Father's sister's daughter	7
Classificatory cross-cousins	6
Mother's sister's daughter	11
Mother's sister's daughter's daughter	9
Other kinswomen	8
Marriages total	44

The Tuareg claim marriages with a maternal cousin or with her daughter to be superior to cross-cousin marriage because a man and his father will then belong to the same matrilineage.

The clans are divided into sections. There are four of these in the Dag Rali clan and eight in the three sub-clans of the Aṭouh-en-Tehele. When grazing is good the sections are identical with camps of 10–20 tents, which otherwise are split up in minor camps of 2–7 tents. A small camp generally consists of an extended family which co-operates in goat-herding and in various other tasks, although all animals are individually owned and every tent or household is self-supporting. The big camps formed during good grazing are made up of three or four small camps consisting of extended families related to each other. But the small camps within the bigger camps remain co-operative in goat-breeding, and there is generally a distance of 50–100 metres between each in order that their flocks shall not mix. When the small camps join each other and form bigger camps under favourable grazing conditions, it is not only because kinsmen appreciate each other's company, but also because the big camp is a co-operative unit in camel-breeding and caravan trading, for which the labour cannot be provided by a goat-herding camp. In case the small goat-herding units cannot remain together they camp so close to each other that contact between them is comparatively easy. A big camp will never correspond to a lineage, but will comprise part of a matrilineage of three to five generations plus people attached to the camp through their fathers and husbands according to the rules of residence outlined above (cf. fig. 11). A big camp or section has a leader, who with the title of *Khalifa* may also be the representative of the section in relation to the clan chief *(Amȳar)*. These khalifas are not necessarily chosen according to any rule of descent, but ideally the succession is matrilineal as it is for clan chiefs.

The kinship system in Ahaggar is different from that in Air (fig. 8–9), but the rules of kinship behaviour are very much the same. Joking relationship between cross-cousins, and joking and avoidance between in-laws are practised also in Ahaggar. But joking with a mother's brother's wife seems to be unknown in most clans.

[Text continues on p. 108]

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Fig. 11.–The section camp of the Kel Azernan (the Isandan sub-clan of the Aghuh-en-Tehele clan). The camp comprises three goat-herding units of four, five, and seven tents forming three independent camps in case of dry pasture. When grazing is good the three goat-herding camps which co-operate in camel-herding and caravan trading will camp on the same spot with a small distance between each in order that the flocks of the three units shall not mix. – The household to the extreme right does not follow the general rule of residence illustrated fig. 10. Its members accordingly should camp together with the husband's family, which, however, lives in Air whence he has emigrated to Ahaggar.

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

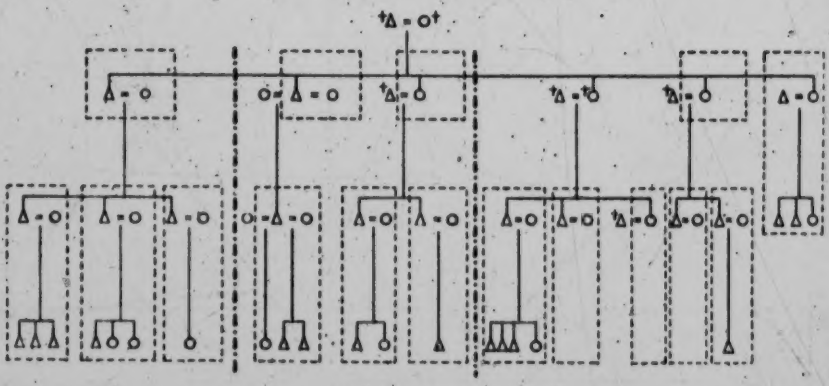

Fig. 105. The section camp of the *Kel Ayrrnen* (the *Irandan* sub-tribe of the *Ajjuh-en-tekli*). The camp comprises three goat-herding units of four, five, and seven tents forming three independent camps in case of dry pasture. When grazing is good the three goat-herding camps which co-operate in camel-herding and caravan trading will camp on the same spot with a small distance between each in order that the flocks of the three units shall not mix. The household to the extreme right does not follow the general rule of residence illustrated Fig. 103. Its members accordingly should camp together with the husband's family, which, however, lives in Ayr whence he has emigrated to Ahaggar.

also the representative of the section towards the tribal chief, should preferably be elected. The members of one section will frequently intermarry with members of another particular section, but members of a section will generally marry into more than one particular section and sometimes into sections of foreign tribes.

When grazing is good the sections are identical with camps of 10–20 tents, which otherwise are split up into minor camps of 2–7 tents. These minor camps generally consist of an extended family which co-operates in goat-herding and in various other tasks, although all animals are individually owned and every tent or household is self-supporting – "it has its own churning bag and its own millet bag", as the Tuareg put it. The section camps formed during good grazing are made up of three or four small goat-herding camps which constitute extended families, but the small camps within the section camps remain co-operative in goat-breeding, and there is generally a distance of 50–100 metres between each in order that their flocks shall not mix. When the small goat-herding camps of a section join each other and form bigger camps under favourable grazing conditions, it is not only because kinsmen appreciate each other's company, but also because the big camp of a section is a co-operative unit in camel-breeding and caravan trading, for which tasks a goat-herding camp cannot spare the labour. Should the small goat-herding camps of a section be unable to remain together, they camp so close to each other that contact between them is comparatively easy. A section camp is illustrated in the diagram below (Fig. 105). The formation of such camps is not generally possible without annual pasture, and section camps are particularly common in the *Dag Rali* tribe resident mainly in the

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outlined above from Ahaggar, with the exception that the Ayr Tuareg have never practised the one year's stay in the bride's family camp after marriage. To-day the *Kel Ferwan* tribes of Southern Ayr do not follow very strictly any particular rule of residence. There is a strong tendency to patrilocal residence, but a man will usually continue to live with kinsmen of the camp where he was brought up as a child. If a man has grown up with maternal relatives owing to the loss of his father as a boy, or because his mother and father have divorced, he may remain with matrilineal relatives. I believe that all tribes of the *Kel Ferwan* group of Southern Ayr are bilateral kin groups. And if in the past these Tuareg practised the rules of residence outlined above from Ahaggar, the tribes have been bilateral units as there have always been many marriages contracted between people of different tribes. Two tribes of Ayr, namely the *Imezzureg* and the *Kel Akerra*, claim that they have intermarried regularly from very ancient times, because the father of the *Kel Akerra* tribe was the brother of the mother of the *Imezzureg* tribe, while the father of the *Imezzureg* was a cross-cousin of *Kel Akerra*'s mother. These two tribes possess their individual chiefs, but have always been very mixed. It seems as if chiefs were elected according to matrilineal rules in the past, but to-day it is claimed that a son of a deceased chief should be the first in line of succession (cf. p. 456 ff.).

In Southern Ayr camps of all possible tribes to-day live among each other. There are no grazing grounds or particular territories nowadays when everybody is free to go where he likes with flocks and herds. No Tuareg have particular rights over land, and ban on grazing within certain areas, as in Ahaggar, is unknown. This is said also to have been the case in the past. But in the times preceding the French occupation of Ayr, all vassal tribes had their particular territories which, according to Capot-Rey, were formerly marked by walls (Capot-Rey 1953a, p. 265). I have not been able to confirm this, but the Tuareg told me that in the past tribal territories had frontiers marked out by river valleys or by natural objects such as large trees. The vassal tribes did not own these territories, which were allotted them by the drum-chief of the noble *Kel Ferwan* tribe, the *Irawatten*. The traditional territories or grazing grounds of most *Kel Ferwan* tribes are indicated in the list on p. 423 ff.

At present there seem to be no sectional division of the *Kel Ferwan* tribes corresponding to the division into sections in Ahaggar. The *Kel Ferwan* Tuareg generally live in small camps comprising a few tents. These camps, which co-operate in stock-herding, do not generally exceed four or five tents inhabited by kinsmen who generally constitute an extended family, e.g., (1) husband, wife, married sons, and their children; (2) two brothers, their wives, married sons, and their children; (3) a brother and a sister together with their spouses and children; (4) husband, wife, unmarried children, husband's mother and mother's sister, and his sister's daughter with her husband. These small camps, as may be seen, are not based upon any particular rule of residence in agreement with what has been said of residence rules above. The households of a little camp of this kind will remain constantly together to co-operate not only in goat-herding, but generally in camel-breeding also. The labour for camel-herding and caravan trading is more easily provided for in Ayr than in Ahaggar. For camels are rarely taken to very distant grazing grounds, and caravan trading is often limited to expeditions to Damergu where the Tuareg fetch their millet. The Tuareg tribes of the *Kel Ferwan* group living around Agadez have no true co-operative units apart from the small camps of up to four or five tents. Such small camps of extended families may temporarily join each other in a bigger camp during the

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Fig. 132b. Cf. text Fig. 132a.

deep, and are dug into the sandy river bed to lead its water to the gardens of the valley terrace. A map of the foggara aqueducts placed in the river valley of Taṛhawhawt is reproduced by Capot-Rey (Capot-Rey 1953a, Fig. 18 p. 328). There are many advantages attached to the use of foggara systems of the Ahaggar type, for once the aqueducts are dug water automatically flows to the garden. But there are also disadvantages. If a foggara valley is heavily flooded after rains and changed into a roaring stream, the aqueducts are destroyed and the crops also. In general it will be necessary to abandon a foggara system after some years, as it must be cleaned at intervals and in time it becomes too dangerous to work in them as subsidences may occur and kill workers. It may also happen that a river valley is not flooded at all for a period of years when it becomes essential to move to another valley, rich in water under the sandy river bed, to make a new foggara there. For all these reasons deserted foggara systems are common in the river valleys of Ahaggar.

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The *foggara* system is unknown south of Ahaggar and has on the whole a rather limited distribution in the Sahara. One reason for this is perhaps that the construction and maintenance of the aqueduct imply the agricultural co-operation of several households. This is not the case with the other common system in Ahaggar, the use of wells (*tunin*, sing. *tanut*) from which water is raised by animal traction. The wells are usually shallow and not very difficult to dig out, and the maintenance of the whole system is usually limited to occasional mendings of the zebu's harness and of the large waterbag. While a foggara canal is always used for the irrigation of several gardens (6–12), the wells are used for single gardens. The irrigation wells are dug into the valley terrace so that they are not destroyed by a flood, and in dry years watering from wells is considered the better system. But in the period when crops need much water irrigation by means of wells is hard work for the garden owner who must drive his ox all day long.

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Irrespective of the system resorted to irrigation of a garden is done in the same manner. Water from the *foggara* aqueduct or water raised from well flows into a large basin (*tihemt*) through a canal

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Fig. 137. The fresh soil carried to old gardens is placed in small heaps to be spread out between the tender plants of wheat and barley. Ahaggar, Abalessa.

241 *andrum sativum*, *Cuminum Cyminum* (*azkar*), *Daucus Carota* (*ezzeruget*), *Cucumis melo*, *Lagenaria vulgaris* (cf. Maire 1933, and particularly Maire 1940, p. 401).

245 [262] In addition to the above-mentioned plants there are various types of fruit trees which do not play any considerable rôle for food. The gardens contain very few date palm trees (*tazzayt*, *Phoenix dactylifera*) and there are no palm trees of any value in the gardens situated in the upper mountain [251] zones where the fig tree (*tahart*, *Ficus carica*) thrives much better than in the lower country; the figs are [386] consumed fresh, or they are put on strings for drying, common practise elsewhere in North Africa. The pomegranate (*terrummant*, *Punica Granatum*) is grown in some gardens; its fruits are eaten, and they are also used for dyeing skins (cf. p. 282). Grapes (*tezzebibt*, *Vitis vinifera*) are also grown in some gardens.

Maire mentions the cultivation of the peach (*Prunus Persica*) and the apricot (*Prunus Armeniaca*) (cf. Maire 1940, p. 401). These fruit trees have undoubtedly been quite recently introduced for Foucauld states that they are not grown in Ahaggar (cf. Foucauld 1951–52, I, p. 79 f.).

243 423 There are nowadays many agriculturists who have their private gardens so that they cultivate their winter crops and their summer crops entirely for their own use. But most agriculturists grow winter crops of wheat and barley on behalf of the Tuareg who are then the true garden owners.

[312] [476] Agriculturists who cultivate their gardens on their own behalf frequently irrigate crops by means of draught animals (zebus) which raise water from wells, but there are also some farmers who cultivate independently without any contract with pastoral Tuareg and nevertheless belong to a *foggara* team.

243 It can be estimated that an independently working agriculturist obtains a total yield of about 700 kilos of wheat and barley grown in winter. Of this yield he gives 10 kilos to the *Amenukal*, or to the

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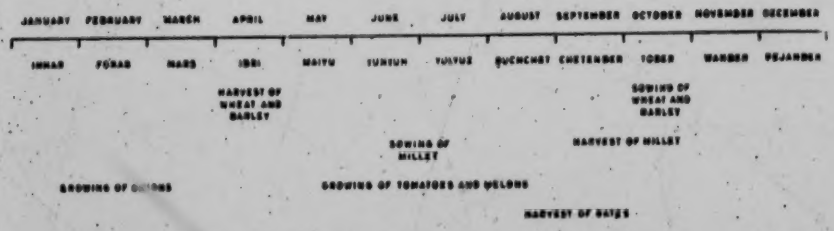

Fig. 139. Horticultural calendar from Ahaggar.

The Tuareg and the negroid agriculturists have a lunar calendar of twelve months corresponding to the Arab calendar, but a lunar calendar has no practical value for the indication of seasonal agricultural activities. The Julian Calendar is known to some people of Ahaggar as well as to other Berbers of the Sahara and the Atlas. Tuareg names of Julian months are given above. Very few people in Ahaggar know the exact beginning and the end of the twelve Julian months, but a few names are used as seasonal terms: *innar* "midwinter", *mars* = "beginning of spring", *ibri* "early harvest" (of wheat and barley), *maiyu* "beginning of summer", *tober* = "late harvest" (millet).

which no definite figures can be given, while the yield of fruit trees growing in the garden plot does not necessarily belong to the agriculturist. These trees frequently belong to pastoral Tuareg.

I think it can be estimated that an agricultural household with its own garden produce about a thousand kilos of vegetables food products annually for its private use. We can add that though the members of an agricultural household live mainly on vegetable food products they also acquire a certain amount of food from livestock, which normally comprises a few goats and sheep, and perhaps one or two zebus. Conditions of stock-breeding are not always favourable to people who live continuously on the same spot, but it is advantageous to the agriculturists of Ahaggar, who live close to valleys with some pasture, that they are able to feed their animals on green garden products when pasture is badly developed and thus avoid the disaster of a drought. It is also an advantage to most agriculturists that they do not have to water their animals which can drink freely from the irrigation canals. The agriculturists can kill a few goats or sheep annually, they obtain milk and a little butter to be used mainly as a sauce for bread and porridge, and they make cheese of the *awles* type (cf. p. 224), but they never make cheese from fresh milk as do many pastoral Tuareg when milk is abundant. The agriculturists also breed fowls and pigeons, and some of them have an important meat supply from hunting with steel-traps (hares, jackals, fennecs, and ravens). Collecting, on the other hand, is of little or no value to irrigation farmers of Ahaggar.

The economic position of agriculturists who work without any particular obligations towards pastoral Tuareg is tolerably good. It is less favourable to those who grow winter crops also on behalf of the Tuareg, as do most cultivators. Some of them irrigate the garden plot with water raised from wells by oxen which may belong to the cultivator or to the Tuareg. But most agriculturists who work for the pastoral Tuareg irrigate by means of *foggara*. It is very strenuous work to dig a *foggara* canal, and co-operation is needed not only for this but also for the maintenance of the whole irrigation system. The gardens are individually tended by the agriculturists, who co-operate in the *foggara* work under the leadership of a headman known as *amgar n efeli*, that is "chief of the *foggara*". This headman is

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appointed by the Tuareg garden owners and is rewarded by a garden of his own for his responsibility in supervising all co-operative work. The unit of agriculturists co-operating at the same *foggara* may or may not correspond to an extended family. The agriculturists co-operating on any large *foggara* irrigating ten or twelve gardens frequently represent two or three distinct families which are not linked to each other by kinship bonds. The cultivators of a *foggara* comprising nine gardens at Taṛhawhawt belong to three distinct, unrelated families. This is quite natural in view of the fact that contracts between the Tuareg and the cultivators are made individually.

There may also be no kinship bonds between the pastoral Tuareg who have gardens at the same foggara, and there are even Tuareg who own two or three gardens situated in widely separated river valleys of Ahaggar. But Tuareg garden owners of the same foggara frequently belong to the same tribe or even to the same tribal section. When a garden-owning Tuareg dies, his garden will generally pass to somebody within his family, but there seems to be no fixed rules governing the transference of gardens.

The individual contract between a Tuareg garden owner and his cultivator is made for a period of six months – the period of growth for wheat and barley. The agriculturist is responsible for all garden work, and the Tuareg garden owner has the following obligations:—

(1) To supply his cultivator with a hoe every year, or every two years in case a very good hoe is given.

(2) To pay for repairs of the *foggara* system, or for the digging of a new *foggara*. This payment is known as *almarsor* and consists of two kilos of cereals or dates every working day until water reaches the garden.

(3) To pay for the making of garden beds. This payment is known as *éhéré n egalab*, and is made only once as long as the garden remains on the same spot. When a garden is moved after a period of three or four years the payment must be made again. It varies with the size of the garden and the quality of its soil; in general it consists of 15–25 kilos of cereals.

Fig. 140. Millet (*ándlé*) of very high growth. It is said that this particular millet type was introduced to Ahaggar from the south – possibly from Ayr. Ahaggar, *Ahl Azzi* Arabs.

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caravans of the south or by Ayr Tuareg who import more millet than they need for their own use. But millet is cheaper in Damergu than at the Agadez market, and most Tuareg prefer to organize their own millet caravans with camels and donkeys as pack-animals. In Damergu most Ayr Tuareg get millet in exchange for livestock or they buy it for money. Their caravans are not always very large, for the Southern Ayr Tuareg of the *Kel Ferwan* group do not organize their caravans co-operatively on the basis of kinship. Many individual households fetch their own millet with a few animals, and it is comparatively easy to do so as the millet growing country of Damergu is not very far away – the distance from Agadez to Tanut is only about 300 kilometres. The Ayr Tuareg do not have to engage in extensive trading expeditions to procure millet, and can buy millet very cheaply. A household, it is said, does not have to sell a great many animals to secure the necessary supply of millet. Three or four camel loads will cover the needs of most households, and this amount of millet can be acquired for comparatively few animals – particularly if the animals vended are sheep, which have become very expensive in recent times owing to the rapid increase of Europeans at Agadez. An extremely good sheep or ram for slaughtering can bring in 2000 to 3000 West African francs, and a Tuareg household which buys millet in Damergu will need less than 10,000 francs to acquire the quantity necessary for a year. Thus the Ayr Tuareg can obtain their millet for a few sheep, and there are very few, if any, who do not posses this surplus, and it should be repeated that the increment of livestock is never stopped by drought periods as in the north. The extremely high price for sheep for butchering is a recent phenomena due to the increase of the French population. Fully-grown sheep or rams are expensive, and this is also the case with fowls, while goats are cheap. I believe we can estimate that a household would have to sell about 15 goats anually to obtain the amount of millet necessary for one year's consumption. However, there is little doubt that it has always been quite easy for the Tuareg of Southern Ayr to obtain the requisite amount of millet in exchange for livestock.

Millet and milk constitute the basic nourishment of the Ayr Tuareg, but they are very fond of an occasional change of food. And I believe that this is one important reason why the Ayr Tuareg, like those of Ahaggar, collect wild seeds even in years when grown cereals are abundant. For a change, the Ayr Tuareg are also extremely fond of dates which are not grown to any great extent in their own country. A few Ayr Tuareg own palms yielding dates of poor quality, and I think that a few households also obtain some dates from Ingal. However, most dates eaten in Ayr are imported from the oasis of Bilma, situated in the very barren desert country between Ayr and Tibesti, about 700 kilometres north-east of Agadez.

The trade with Bilma is apparently an ancient one, and its foundation is salt which is of a very bad quality compared with that mined at Amadror in the north. The rock-salt of Amadror is excellent for food, and though there is one good quality of Bilma salt that is used for food by the Tuareg of Ayr, most salt from Bilma contains much soil and other impurities. This impure salt is excellent for domestic animals which, in Ayr and further south where salt pastures do not exist, need a lot of salt. The Ayr Tuareg, and particularly those who do not visit the country of Azaouaq at the end of the rains, need salt not only for their own food but also for their domestic animals. They obtain this from Bilma, which is visited by caravans in autumn or in the early winter. The inhabitants of Bilma, like other oases-dwellers, are in constant need of cereals and meat, and these products are imported